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## RE:

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Thomas Zell

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Thomas Zell (Signature)

Application No. : 09/267,968  
Filed : 3/12/1999  
Inventor(s) : Christopher R. Dance et al.  
Docket No. : R/98021  
Confirmation No. : 7804  
Examiner : Devona E. Faulk  
Art Unit : 2644  
Title : METHOD AND APPARATUS FOR REDUCING  
IMPULSE NOISE IN A SIGNAL PROCESSING  
SYSTEM  
Customer No. : 25453

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## RESPONSE AND REQUEST FOR RECONSIDERATION

Sir:

The Office Action of April 6, 2004 has been carefully considered. Reconsideration of this application in view of Applicant's remarks below is respectfully requested. Claims 1-49 are pending in this Application. Of these, claims 1 and 35 are independent claims.

1. Acknowledgement Of Entry Of Preliminary Amendment Requested

The Office Action Summary does not indicate whether the preliminary amendment and request for approval of drawing changes under 37 CFR 1.121(3) that were mailed by Applicant February 9, 2000 were received and/or entered. Applicant respectfully request receiving in a future correspondence acknowledgment of receipt and/or entry of the aforementioned preliminary amendment so that in the event they were not received or not entered Applicant may resubmit the

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amendments to the specification under the new rules (together with new amended drawings) or if they were received and entered, submit new drawings amended in accordance with the proposed drawing changes (without additional amendments to the specification).

## 2. Response to Rejection Under 35 USC 103 of Claims 1 and 35

The Office Action starting on page 3 rejects claims 1 and 35 under 35 USC 103 as being unpatentable over Kuruoglu ("Impulsive Noise Elimination Using Polynomial Iteratively Reweighted Least Squares") in view of disclosure in Applicant's background (Applicant's specification page 2, line 20 – page 3, line 9).

In rejecting claims 1 and 35 the Office Action states on page 2 that although "Kuruoglu does not specifically teach estimating the parameters of an alpha-stable distribution, it is obvious that the parameters have to be estimated" and on page 3 that although "Kuruoglu does not specifically teach [an] estimator, one is obviously present". Further on pages 3-4, the Office Action states that by "virtue of what the alpha-stable distribution, a distribution to which there is no explicit expressions for the probability distribution function (pdf) (pg. 347, section 1.1), an estimator has to be present". (For completeness, it is noted that Applicant's background cited in the Office Action relates to discussion of an observed signal including noise and data components.)

Applicant respectfully disagrees that Kuruoglu taken singly or in combination with Applicant's background cited in the Office Action discloses or suggests determining parameters of an alpha-stable distribution *through estimation*, as claimed by Applicant. Instead Applicant submits that the presence of an estimator is not required for *determining* parameters of the alpha-stable distribution. That is, parameters of an alpha-stable distribution may be determined by pre-assignment and not by estimation as taught and claimed by Applicant. Thus, determining parameters of an alpha-stable distribution by estimating them is *not* suggested by the absence of discussion relating thereto in Kuruoglu.

More specifically referring to the section of Kuruoglu cited in the Office Action, the Undersigned understands that the section of Kuruoglu cited in the Office Action does not specify how the parameters of the alpha stable distribution are determined (as similarly noted in the Office Action). Instead Kuruoglu provides on page 347,

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column 2 and page 348, column 1, that parameter parameters of the alpha-stable distribution include: a location parameter given by  $-\infty < a < \infty$ , a dispersion given by  $\gamma > 0$ , a characteristic exponent given by  $0 < \alpha \leq 2$ , and a symmetry parameter given by  $-1 \leq \beta \leq 1$ . Thus, Kuruoglu taken singly or in combination with Applicant's background cited in the Office Action fails to disclose a parameter estimation module or method therefor for determining parameters of an alpha-stable distribution to model impulse noise *through estimation*.

Accordingly, Applicant respectfully submits that independent claims 1 and 35 are believed to be patentably distinguishable over Kuruoglu taken singly or in combination with Applicant's background cited in the Office Action.

### 3. Response to Rejection Under 35 USC 103 Of Claims 2-34 and 36-49

The Office Action on page 4 rejects claim 2 under 35 USC 103(a) as being unpatentable over Kuruoglu in view of Applicant's background and further in view of Wu, U.S. Patent 6,072,782. In addition, the Office Action starting on page 4 rejects claims 7, 8, 22, 36, 40, 43 and 44 under 35 USC 103(a) as being unpatentable over Kuruoglu in view of Applicant's background and further in view of Ma ("Parameter Estimation and Blind Channel Identification in Impulsive Signal Environments", 1995). Also, the Office Action on page 7 rejects claim 47 under 35 USC 103(a) as being unpatentable over Kuruoglu in view of Applicant's background and further in view of Wu and Johnson et al., U.S. Patent No. 5,960,036. Finally, the Office action starting on page 7 rejects claim 48 under 35 USC 103(a) as being unpatentable over Kuruoglu in view of Applicant's background and further in view of Johnson et al. In response thereto, Applicant submits there is no need to specifically address the merits of these claim at this time because they depends from either independent claim 1 or independent claim 35 which are clearly patentable for the reasons set forth above.

### 4. Fee Authorization And Extension Of Time

No additional fee is believed to be required for this amendment or response, however, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation

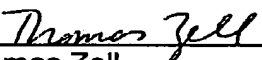
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Deposit Account No. 24-0025.

5. Conclusion

In view of the foregoing remarks, reconsideration of this application and allowance thereof are earnestly solicited. In the event the Examiner considers a personal contact advantageous to the disposition of this case, the Examiner is hereby requested to call Attorney for Applicant(s), Thomas Zell.

Respectfully submitted,

  
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Thomas Zell  
Attorney for Applicant(s)  
Registration No. 37,481  
Telephone: 650-812-4282  
Date: July 6, 2004